

**PROPOSED REMEDIAL OBJECTIVES REPORT
16th STREET AND CAMELBACK
WATER QUALITY ASSURANCE REVOLVING FUND
REGISTRY SITE
PHOENIX, ARIZONA**



March 24, 2015

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LIST OF ABBREVIATIONS & ACRONYMS

A.A.C.	Arizona Administrative Code
ADEQ	Arizona Department of Environmental Quality
ADWR	Arizona Department of Water Resources
AMA	Active Management Area
A.R.S.	Arizona Revised Statutes
CAB	Community Advisory Board
COC	Contaminant of Concern
FS	Feasibility Study
LWUS	Land and Water Use Study
PCE	Tetrachloroethene
RO	Remedial Objective
RI	Remedial Investigation
SRL	Soil Remediation Level
SRP	Salt River Project Agricultural Improvement and Power District
WQARF	Water Quality Assurance Revolving Fund

1.0 INTRODUCTION

The Arizona Department of Environmental Quality (ADEQ) has prepared this Remedial Objectives (ROs) Report for the 16th Street and Camelback Water Quality Assurance Revolving Fund (WQARF) Registry Site (the Site) to meet requirements established under Arizona Administrative Code (A.A.C.) R18-16-406. This RO Report relies upon the Land and Water Use Study (LWUS) and questionnaires contained in the 16th Street and Camelback Remedial Investigation (RI) Report prepared by ADEQ and others.

ROs are established for the current and reasonably foreseeable uses of land and waters of the state that have been or are threatened to be affected by a release of a hazardous substance. Pursuant to A.A.C. R18-16-406(D), it is specified that reasonably foreseeable uses of land are those likely to occur at the site and the reasonably foreseeable uses of water are those likely to occur within one hundred years unless site-specific information suggests a longer time period is more appropriate.

Reasonably foreseeable uses are those likely to occur, based on information provided by water providers, well owners, land owners, government agencies, and others. Not every use identified in the LWUS will have a corresponding RO. Uses identified in the LWUS may or may not be addressed based on information gathered during the public involvement process, limitations of WQARF, and whether the use is reasonably foreseeable.

The ROs must be stated in the following terms: (1) protecting against the loss or impairment of each use; (2) restoring, replacing, or otherwise providing for each use; (3) when action is needed to protect or provide for the use; and (4) how long action is needed to protect or provide for the use.

The ROs chosen for the site will be evaluated in the feasibility study (FS) phase of the WQARF process. The FS will evaluate specific remedial measures and strategies required to meet ROs. A remedial strategy is one or a combination of six general strategies identified in Paragraph B.4 of Arizona Revised Statutes (A.R.S.) 49-282-06 (plume remediation, physical containment, controlled migration, source control, monitoring, and no action.). A remedial measure is a specific action taken in conjunction with remedial strategies to achieve one or more ROs (for example, well replacement, well modification, water treatment, water supply replacement, and engineering controls.).

The FS will propose at least three remedies, a reference remedy and generally two alternative remedies, capable of meeting ROs. A reference remedy is a remedial strategy or combination of remedial strategies and measures capable of achieving ROs, and is compared with alternative remedies for purposes of selecting a proposed remedy. An alternative remedy is a remedial strategy or combination of remedial strategies and measures different from the reference remedy; alternative remedies are compared with the reference remedy for purposes of selecting a proposed remedy. Proposed remedies will also be generally compatible with future land and water use specified by land owners and water providers.

Written comments on this Proposed RO Report will be accepted for a period of 30 days following its release.

2.0 REMEDIAL OBJECTIVES FOR LAND USE

The Site is located in the City of Phoenix and is bounded approximately by Camelback Road to the north, 17th Street to the east, Highland Avenue to the south and 15th Street to the west. Contaminant of concern (COC) for the Site is tetrachloroethene (PCE). After several years of investigations, the source area of the COC was determined to be at the former drycleaner facility at the southeast corner of 16th Street and Camelback Road.

Typically, ROs for land use are established for those properties known to be contaminated with hazardous substances above a Soil Remediation Level (SRL) or a risk-based level. However; all soil investigations conducted in the southeast corner of 16th Street and Camelback Road indicate that the COC is no longer present in soils at the Site.

2.1 Summary of Current and Reasonably Foreseeable Land Use

Generally, the Site is located in a commercial area. Based on the current zoning maps provided by the City of Phoenix, the Site is zoned as commercial with possible redevelopment to multifamily residential. Currently the northwest corner of Highland Avenue and 16th Street is under construction for an apartment complex.

2.2 Soil Remedial Objective

Based on the information presented above, the COC is not present in soil at concentrations greater than Arizona remediation standards. Therefore, no remedial objectives are needed for land use or soil remediation.

3.0 REMEDIAL OBJECTIVES FOR GROUNDWATER USE

The groundwater use portion of the Use Report is an inclusive summary of information gathered from the Arizona Department of Water Resources (ADWR), water providers, municipalities, and land owners. Currently there are no groundwater supply wells within the Site boundaries.

3.1 Summary of Current and Reasonably Foreseeable Groundwater Use

The Site lies within the Phoenix Active Management Area (AMA). The Phoenix AMA was created by the Arizona Groundwater Management Code passed in 1980 and covers approximately 5,646 square miles in central Arizona. All groundwater withdrawn from any AMA must occur under a groundwater right or permit, unless groundwater is being withdrawn from an exempt well.

According to ADWR records, there are no non-exempt withdrawal wells or exempt withdrawal wells in the Site. The City of Phoenix and Salt River Project Agricultural Improvement and Power District (SRP) have service area rights in the Site, however, of the two, only SRP is currently pumping groundwater in the vicinity of the Site.

Land and water use questionnaires were mailed to the City of Phoenix and SRP to obtain information regarding current and future uses of groundwater within the Site. The following paragraphs identify current and foreseeable groundwater uses within the Site and ROs.

The Site is in the City of Phoenix and the Phoenix AMA, an area where groundwater use is controlled and regulated. The City of Phoenix does not have groundwater wells within the Site but has indicated that it may install wells here in the future. Currently a portion of the groundwater within the Site is contaminated with COCs that would restrict use of the groundwater by the City of Phoenix if the city wanted to use the groundwater for municipal purposes.

With the exception of two SRP wells, the predominant well use is for monitoring purposes. Regarding current and projected water use, SRP states, “Currently, the wells provide water for irrigation but SRP anticipates that the wells will transition to drinking water supply wells as the area develops. SRP is in discussions with the City of Phoenix about providing additional groundwater to the City when surface water supplies are unavailable or insufficient and to give the City more operational flexibility.”

In its survey responses, SRP indicates because of its reliance on groundwater to supplement its surface water supplies during periods of drought, SRP is very concerned with any water quality problems in the aquifer or with a threat of groundwater contamination. It is important to SRP to safeguard the ability to utilize their wells, and SRP indicates it is conceivable that during periods of severe drought, SRP wells in the area may be utilized at their full annual registered volumes.

Also in its land and water use questionnaire response, SRP anticipates all of its properties in the vicinity of the Site will remain in use in the future. Therefore, SRP believes any plan to remediate

groundwater needs to recognize the highly variable pumping scenarios that may occur in and around the Site.

3.2 Groundwater Remedial Objective

There is no current groundwater use in the Site, however, the regional aquifer is considered to be a drinking water source for the City of Phoenix and SRP. Therefore, the current and future use of the regional aquifer must be protected.

The remedial objective for regional groundwater at the site is to protect for the use as a groundwater supply by the City of Phoenix, and SRP. This action is currently not needed but may be needed if/when groundwater use changes to municipal/drinking water. This action will be needed for as long as the level of contamination in the groundwater threatens the use of the regional groundwater for municipal/drinking water uses.

4.0 REMEDIAL OBJECTIVES FOR SURFACE WATER USE

The surface water use portion of the Use Report indicates that surface water usage within the Site is for agricultural and urban irrigation. The surface water source is outside the Site.

4.1 Summary of Current and Reasonably Foreseeable Surface Water Use

SRP does not extract groundwater from the Site. However, surface water is conveyed across the Site via lateral canals which can be used for irrigation within the site and discharges into the SRP Grand Canal south of the site which is subsequently used for irrigation outside of the site. Future SRP plans for the Grand Canal include a possible drinking water treatment plant that may be constructed at the end of the Grand Canal.

4.2 Surface Water Remedial Objective

Current surface water use in the Site is for irrigation and comes from groundwater sources outside the site; SRP's reasonably foreseeable plans are to use the surface water for drinking water purposes. However the source of this surface water is from groundwater outside the site and is discharged to concrete lined canals. Contaminated groundwater within the site does not discharge to these canals and therefore no RO is necessary. When SRP opts to construct their drinking water treatment plant, the water will be adequately protected for drinking water use.

APPENDIX A

A COMMENTS RECEIVED FROM ORAL SOLICITATIONS FOR PROPOSED REMEDIAL OBJECTIVES

As per Arizona Administrative Code (A.A.C.) R18-16-406(I), a community advisory board (CAB) meeting was held at A.L. Moore-Grimshaw Mortuaries Bethany Chapel on March 11, 2015 during the 45-day to 90-day public solicitation period for the Remedial Objectives (ROs). The purpose of the meeting was to solicit and consider proposed ROs for the 16th Street and Camelback Water Quality Assurance Revolving Fund (WQARF) Site. The meeting gave a public forum for oral and written comments to be submitted. Arizona Department of Environmental Quality (ADEQ) received an oral proposed RO from the CAB members present during the meeting. The oral proposed RO received is as follows:

CAB Members

- 1) The CAB requested that the sample RO presented during the CAB meeting which designated that the regional groundwater at the site be protected for the use as a groundwater supply by the City of Phoenix, and Salt River Project (SRP).

APPENDIX B

B COMMENTS RECEIVED FROM WRITTEN SOLICITATIONS FOR PROPOSED REMEDIAL OBJECTIVES

As mentioned in Appendix A, per Arizona Administrative Code (A.A.C.) R18-16-406(I), a community advisory board meeting was held at A.L. Moore-Grimshaw Mortuaries Bethany Chapel on March 11, 2015 during the 45-day to 90-day public solicitation period for the Remedial Objectives (ROs). The purpose of the meeting was to solicit and consider proposed ROs for the 16th Street and Camelback Water Quality Assurance Revolving Fund (WQARF) Site. The meeting gave a public forum for written comments to be submitted. The Arizona Department of Environmental Quality (ADEQ) did not receive any written proposed remedial objectives during or following the meeting.